Alberta Notifiable Disease Summary

2023

Alberta

Health, Government of Alberta
September 2024
Alberta Notifiable Disease Summary 2023
ISBN: 978-1-4601-6115-9
© 2024 Government of Alberta
For more information about this document contact:
Analytics and Performance Reporting Branch, Alberta Health
PO Box 1360 Stn Main
Edmonton, AB T5J 2N3
Email: Health.Surveillance@gov.ab.ca
This Publication is issued under the Open Government License – Alberta (http://open.alberta.ca/licence)
This document is available online at: https://open.alberta.ca/publications/alberta-notifiable-disease-summary

Key Highlights

- **Escherichia coli (Verotoxigenic)**: There was a substantial increase in the number of *E. coli* cases reported in 2023 associated with an *E. coli* O157:H7 outbreak in childcare facilities in the Calgary Zone. Nearly half of the 964 cases from 2023 were linked to this outbreak. Cases of Haemolytic Uremic Syndrome (HUS) were also elevated compared to previous years, with 28 cases in 2023 compared to 11 the year prior. This increase was also associated with the Calgary Zone outbreak in childcare facilities.
- **Pertussis**: Alberta experienced a rise in pertussis cases in 2023, with a total of 894 cases (19.04 per 100,000 population) compared to 13 cases (0.29 per 100,000 population) in 2022 and 1 case (0.02 per 100,000 population) in 2021. Although cases were predominantly located in the North and South Zones, pertussis outbreaks were declared in all Zones in 2023.
- **Measles**: In 2023, Alberta had its first case of measles since 2020. This case of measles was acquired out of country, with no onward transmission of the disease.
- **Pneumococcal Disease, Invasive (IPD)**: The number of IPD cases continued to increase this year from 426 cases (9.78 cases per 100,000 population) in 2019 to 816 cases (17.38 cases per 100,000 population) in 2023, representing a 92 per cent increase. The 2023 case number and rate was the highest since 1998 when it became reportable, with cases mainly among the middle and older age groups, rather than young children. Pneumococcal immunization (Prevnar 20 and Pneu-C15) is offered as part of the routine childhood immunization program, to those aged 65 years and older, and those at high risk of serious health outcomes. Among the 816 cases in 2023, almost all (752 cases, 92%) were at high risk of serious outcomes while over three quarters (621 cases, 76%) were infected with a vaccine-preventable serotype. Of the 621 vaccine-preventable cases, only 19 per cent (n = 118) of the cases were immunized.
- **Carbapenemase Producing Organisms (CPO)**: The number of CPO cases continued to increase in 2023. There were 146 cases (3.11 cases per 100,000 population) in 2023 compared to 105 cases (2.33 cases per 100,000 population) in 2022. This represents the highest number of cases since CPO became reportable in 2012. Of the 146 reported CPO cases in 2023, 67 (46%) were travel associated.
- **Human immunodeficiency virus (HIV)**: HIV cases nearly doubled since 2019, with 507 cases (10.80 per 100,000 population) in 2023 compared to 257 (5.90 per 100,000 population) in 2019. Approximately half of cases in 2023 (n = 278) likely acquired HIV infection outside of Canada, which was an increase from 2022 (n = 126). Cases acquired in Canada (n = 229) was the highest number observed since 2016.
- **Syphilis**: Although the rate of congenital syphilis is still considered high, it declined for the first time in four years. The rate of congenital syphilis per 100,000 live births reached a high of 174.4 in 2022 and declined to 121.6 in 2023. Rates of infectious syphilis were also at a 3-year low in 2023, with 57.99 cases per 100,000 compared to 73.51 cases per 100,000 in 2021. More information on Sexually Transmitted and Blood Borne Infections (STBBIs) in Alberta can be found here.
- Additional information on notifiable infectious diseases in Alberta is available on Alberta Health's Interactive Health Data Application (IHDA) and in Other Alberta Health Reports.

Table 1 Total number of notifiable communicable diseases reported in Alberta, 2019 to 2023

Disease Name	2019	2020	2021	2022	2023
Acute Flaccid Paralysis	6	5	2	5	5
Amoebiasis	28	23	18	35	37
Botulism	0	1	2	1	2
Brucellosis	1	0	3	8	0
Campylobacteriosis	1,106	918	840	884	838
Carbapenemase Producing Organisms	69	43	48	105	146
Chikungunya Virus	13	0	0	3	3
Chlamydia (including Lymphogranuloma venereum)	18,194	14,110	14,069	16,797	17,625
Creutzfeldt-Jakob Disease, Classic	9	4	5	14	7
Cryptosporidiosis	138	98	63	96	122
Cyclosporiasis	2	0	2	11	4
Dengue Fever	105	27	25	51	97
Escherichia coli (Verotoxigenic)	393	222	249	362	964
Flavivirus (Other)	14	4	0	0	4
Giardiasis	425	243	238	270	311
Gonorrhea	5,338	4,894	5,017	4,982	5,430
Haemolytic Uremic Syndrome	13	4	7	11	28
Haemophilus influenzae - Non-serotype B, Invasive	67	40	37	102	101
Haemophilus influenzae - Serotype B, Invasive	0	0	1	0	1
Hantavirus	4	2	0	1	3
Hepatitis A	52	16	15	41	59
Hepatitis B	742	457	440	591	832
Hepatitis B (acute cases)	22	18	7	12	12
Hepatitis B (chronic carriers)	703	432	427	564	800
Hepatitis B (unknown carrier status)	17	7	6	15	20
Hepatitis C	1,322	601	646	548	479
Hepatitis C (acute cases)	151	85	87	79	44
Hepatitis C (chronic carriers)	1,141	508	554	466	434
Hepatitis C (unknown carrier status)	30	8	5	3	1
Hepatitis E	5	2	3	1	4
Histoplasmosis	5	4	2	6	6
Human Immunodeficiency Virus	257	195	247	293	507
Influenza A, Seasonal	3,947	3,483	32	11,170	10,660
Influenza B, Seasonal	1,975	2,123	2	35	1,033
Influenza, Novel	0	1	0	0	0
Jamestown Canyon Virus	0	3	1	0	0
Legionellosis	16	10	10	16	13
Leprosy	0	0	2	2	2
Listeriosis (includes congenital)	11	7	6	15	8
Lyme Disease	14	4	16	17	20
Malaria	99	44	44	75	108
Measles	4	1	0	0	1
Meningococcal Disease, Invasive	14	13	9	7	1
Mpox	0	0	0	44	3
Mumps	33	14	5	9	16
Paratyphoid Fever (case and carrier)	23	10	2	17	25
Pertussis	344	134	1	13	894
Pneumococcal Disease, Invasive	426	294	323	626	816
Q Fever	0	1	1	0	3
Rare Or Emerging Communicable Disease	4	1	2	3	2

(continued)

Disease Name	2019	2020	2021	2022	2023
Rickettsial Infection (includes Rocky Mountain Spotted Fever)	2	4	0	1	0
Salmonellosis	753	779	456	577	643
Shellfish Poisoning	0	0	0	0	2
Shigellosis	105	54	24	286	259
Snowshoe Hare Virus Infection	0	1	0	0	0
Streptococcal Disease - Group A, Invasive	410	434	359	434	770
Subacute Sclerosing Panencephalitis	0	0	0	0	1
Syphilis, Congenital	45	57	76	82	58
Syphilis, Infectious (Primary, secondary and early latent)	2,330	2,520	3,248	3,316	2,723
Syphilis, Non-infectious (Late latent)	323	336	405	554	817
Tetanus	0	0	1	1	0
Tuberculosis	246	251	241	244	272
Tularemia	1	1	0	1	0
Typhoid Fever - Case And Carrier	30	9	8	33	33
Varicella (Chickenpox; Hospitalized)	4	6	4	14	15
Vibrio cholerae (non O1, non O139)	0	0	3	0	1
Vibrio parahaemolyticus	2	1	0	1	0
West Nile Virus, Asymptomatic Infection	0	1	0	0	4
West Nile Virus, Neurological Syndrome	2	0	0	0	6
West Nile Virus, Non-Neurological Syndrome	2	0	0	0	4
Yersiniosis	44	31	43	39	58
Zika Virus	5	0	0	1	0

[1] Year is based on diagnosis date.
[2] Numbers may change from previous reports due to improvements in data cleaning and delayed reporting.
[3] In 2023, both rare and emerging communicable diseases cases reported were Taenia
[4] The National Microbiology Lab (NML) has updated their laboratory methodology for identifying toxigenic cutaneous diphtheria. NML retrospectively re-tested Alberta cases using the new methodology, all cases were identified as non-toxigenic and therefore removed from the historic case counts.

Table 2 Rates (per 100,000 population) of notifiable communicable diseases reported in Alberta, 2019 to 2023

Disease Name	2019	2020	2021	2022	2023
Acute Flaccid Paralysis	0.14	0.11	0.05	0.11	0.11
Amoebiasis	0.64	0.52	0.41	0.78	0.79
Botulism	0.00	0.02	0.05	0.02	0.04
Brucellosis	0.02	0.00	0.07	0.18	0.00
Campylobacteriosis	25.39	20.83	18.96	19.60	17.85
Carbapenemase Producing Organisms	1.58	0.98	1.08	2.33	3.11
Chikungunya Virus	0.30	0.00	0.00	0.07	0.06
Chlamydia (including Lymphogranuloma venereum)	417.74	320.14	317.47	372.36	375.38
Creutzfeldt-Jakob Disease, Classic	0.21	0.09	0.11	0.31	0.15
Cryptosporidiosis	3.17	2.22	1.42	2.13	2.60
Cyclosporiasis	0.05	0.00	0.05	0.24	0.09
Dengue Fever	2.41	0.61	0.56	1.13	2.07
Escherichia coli (Verotoxigenic)	9.02	5.04	5.62	8.03	20.53
Flavivirus (Other)	0.32	0.09	0.00	0.00	0.09
Giardiasis	9.76	5.51	5.37	5.99	6.62
Gonorrhea	122.56	111.04	113.21	110.44	115.65
Haemolytic Uremic Syndrome	0.30	0.09	0.16	0.24	0.60
Haemophilus influenzae - Non-serotype B, Invasive	1.54	0.91	0.83	2.26	2.15
Haemophilus influenzae - Serotype B, Invasive	0.00	0.00	0.02	0.00	0.02
Hantavirus	0.09	0.05	0.00	0.02	0.06
Hepatitis A	1.19	0.36	0.34	0.91	1.26
Hepatitis B	17.04	10.37	9.93	13.10	17.72
Hepatitis B (acute cases)	0.51	0.41	0.16	0.27	0.26
Hepatitis B (chronic carriers)	16.14	9.80	9.64	12.50	17.04
Hepatitis B (unknown carrier status)	0.39	0.16	0.14	0.33	0.43
Hepatitis C	30.35	13.64	14.58	12.15	10.20
Hepatitis C (acute cases)	3.47	1.93	1.96	1.75	0.94
Hepatitis C (chronic carriers)	26.20	11.53	12.50	10.33	9.24
Hepatitis C (unknown carrier status)	0.69	0.18	0.11	0.07	0.02
Hepatitis E	0.11	0.05	0.07	0.02	0.09
Histoplasmosis	0.11	0.09	0.05	0.13	0.13
Human Immunodeficiency Virus	5.90	4.42	5.57	6.50	10.80
Influenza A, Seasonal	90.62	79.02	0.72	247.62	227.04
Influenza B, Seasonal	45.35	48.17	0.05	0.78	22.00
Influenza, Novel	0.00	0.02	0.00	0.00	0.00
Jamestown Canyon Virus	0.00	0.07	0.02	0.00	0.00
Legionellosis	0.37	0.23	0.23	0.35	0.28
Leprosy	0.00	0.00	0.05	0.04	0.04
Listeriosis (includes congenital)	0.25	0.16	0.14	0.33	0.17
Lyme Disease	0.32	0.09	0.36	0.38	0.43
Malaria	2.27	1.00	0.99	1.66	2.30
Measles	0.09	0.02	0.00	0.00	0.02
Meningococcal Disease, Invasive	0.32	0.29	0.20	0.16	0.02
Mpox	0.00	0.00	0.00	0.98	0.06
Mumps	0.76	0.32	0.11	0.20	0.34
Paratyphoid Fever (case and carrier)	0.53	0.23	0.05	0.38	0.53
Pertussis	7.90	3.04	0.02	0.29	19.04
Pneumococcal Disease, Invasive	9.78	6.67	7.29	13.88	17.38
Q Fever	0.00	0.02	0.02	0.00	0.06
Rare Or Emerging Communicable Disease	0.09	0.02	0.05	0.07	0.04

(continued)

Disease Name	2019	2020	2021	2022	2023
Rickettsial Infection (includes Rocky Mountain Spotted Fever)	0.05	0.09	0.00	0.02	0.00
Salmonellosis	17.29	17.67	10.29	12.79	13.69
Shellfish Poisoning	0.00	0.00	0.00	0.00	0.04
Shigellosis	2.41	1.23	0.54	6.34	5.52
Snowshoe Hare Virus Infection	0.00	0.02	0.00	0.00	0.00
Streptococcal Disease - Group A, Invasive	9.41	9.85	8.10	9.62	16.40
Subacute Sclerosing Panencephalitis	0.00	0.00	0.00	0.00	0.02
Syphilis, Congenital	1.03	1.29	1.71	1.82	1.24
Syphilis, Infectious (Primary, secondary and early latent)	53.50	57.18	73.29	73.51	57.99
Syphilis, Non-infectious (Late latent)	7.42	7.62	9.14	12.28	17.40
Tetanus	0.00	0.00	0.02	0.02	0.00
Tuberculosis	5.65	5.69	5.44	5.41	5.79
Tularemia	0.02	0.02	0.00	0.02	0.00
Typhoid Fever - Case And Carrier	0.69	0.20	0.18	0.73	0.70
Varicella (Chickenpox; Hospitalized)	0.09	0.14	0.09	0.31	0.32
Vibrio cholerae (non O1, non O139)	0.00	0.00	0.07	0.00	0.02
Vibrio parahaemolyticus	0.05	0.02	0.00	0.02	0.00
West Nile Virus, Asymptomatic Infection	0.00	0.02	0.00	0.00	0.09
West Nile Virus, Neurological Syndrome	0.05	0.00	0.00	0.00	0.13
West Nile Virus, Non-Neurological Syndrome	0.05	0.00	0.00	0.00	0.09
Yersiniosis	1.01	0.70	0.97	0.86	1.24
Zika Virus	0.11	0.00	0.00	0.02	0.00

[1] Year is based on diagnosis date.
[2] Numbers may change from previous reports due to improvements in data cleaning and delayed reporting.
[3] In 2023, both rare and emerging communicable diseases cases reported were Taenia
[4] The National Microbiology Lab (NML) has updated their laboratory methodology for identifying toxigenic cutaneous diphtheria. NML retrospectively re-tested Alberta cases using the new methodology, all cases were identified as non-toxigenic and therefore removed from the historic case counts.

Other Alberta Health Publications

- Alberta Notifiable Disease Guidelines
  https://www.alberta.ca/notifiable-disease-guidelines.aspx
- Alberta STI Summary Report
  https://open.alberta.ca/publications/9781460145449
- Alberta Tick Surveillance Report
  https://open.alberta.ca/publications/2369-0690
- Seasonal Influenza in Alberta Report
  https://open.alberta.ca/publications/2561-3154
- Historical Trends of Selected Notifiable Communicable Diseases in Alberta, 1919 to 2014
  https://open.alberta.ca/publications/9781460125618